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The electrician's measuring apparatus called for by applicant's present claims 1, 2, and 5 includes an elongated body having a first end, a second end, a front side and a back side. The electrician's measuring apparatus disclosed by present claims 1, 2, and 5 further comprises a plurality of slots disposed on the elongated body at a plurality of locations. Each slot of applicant's claimed invention determines placement of electrical boxes, switches and outlets in accordance with selected standards or codes so that a single electrical box, switch, or outlet may be located at different heights that are inherently unrelated. Present claims 1, 2, and 5 further provide a set of indicia on each edge of the front side of the elongated body for indicating the distance from the elongated body's first end, and a level for leveling the length of the claimed apparatus vertically. Advantageously, the electrician's measuring apparatus called for by applicant's present claims 1, 2, and 5 readily guides the electrician to achieve an accurate, level positioning of electrical boxes, switches and outlets at precise locations above regular and irregular floors or other surfaces (such as counters) in compliance with applicable requirements set forth by relevant construction standards and codes.

The Examiner has rejected claims 1, 2, and 5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,598,638 to Plesh in view of U.S. Patent 5,222,303 to Jardine and U.S. Patent 2,713,203 to Gottlieb. The Examiner has indicated that Plesh discloses an apparatus for marking the location of electrical boxes on a wall, having an elongated body with first and second ends and front and back sides and notches. The Examiner has further stated that the notches disclosed by Plesh are disposed on the body at a plurality of locations each determining placement of a box for marking the position of the box above a floor (regular or irregular) in accordance with desired standards such that a single box may be located at different heights (11, 13, 17) that are unrelated to each other. Lastly, the Examiner

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has indicated that the width of the first end of the body disclosed by Plesh is 2 – 4 inches. To support this position, the Examiner has pointed to figure 1 and column 2, lines 55 – 60.

The Examiner has acknowledged that Plesh does not disclose an apparatus having a set of indicia along both edges of the front side for indicating the distance from the first end. Also, the Examiner has stated that Plesh does not disclose a level for leveling the length of the apparatus vertically, a textual portion of the standard or code, or slots for marking the position of the electrical boxes.

However, the Examiner has stated that Jardine discloses a set of indicia located along an edge of the front side of an elongated body, having a first end and a second end, for indicating the distance from the first end. Furthermore, the Examiner has also relied on the Jardine teaching at column 3, lines 1-6 as providing a pair of levels for leveling the length of the apparatus horizontally and vertically, and an aperture (16) used to mark the position of electrical boxes above a floor (regular or irregular) in accordance with selected standards and codes.

The Examiner has further stated that Gottlieb discloses a measuring apparatus having an elongated body with a plurality of slots disposed on the body at a plurality of locations each determining the placement of the cut line conforming to building laws and other requirements for marking a straight line. Additionally, the Examiner has indicated that Gottlieb provides a set of indicia located along each edge of the front side for indicating the distance of the slots from the first end. The Examiner also stated that Gottlieb teaches that indicia (notches) may be also placed directly along the side edges of the body in order to facilitate making a horizontal mark along both sides of the body. The Examiner further stated that the distance of the slots from the first end can be indicated on the front side by any

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desired indicia, and that the apparatus may have text for indicating instructions and guidelines to allow an inexperienced individual using the apparatus to conform to building laws and other requirements.

Gottlieb discloses a measuring strip having length indicating and marking guide members that provide slot-like openings. These slot-like openings are utilized when installing framing members (Gottlieb at col. 3, lines 41-61). The slot-like openings disclosed by Gottlieb are formed within the measuring strip at any desired distance from the base thereof (col. 3, lines 62-67). The measuring strip is utilized during framing, and does not have a plurality of slots located by standard or code related guidelines. Moreover, Gottlieb's measuring strip is not utilized for placing electrical boxes, switches and outlets. Rather, it is merely used for framing.

Jardine discloses an apparatus for installing junction boxes having one aperture of a predetermined shape and size so that a junction box can fit within the aperture, for tracing the shape of a junction box on a wall surface, and subsequently cutting out the marked portion to insert the box (Jardine at column 2, lines 47 – 54). Jardine does not disclose a plurality of apertures, but merely discloses a device having one large aperture adapted to accommodate a junction box.

For quite some time the art has struggled to devise an integrated electrician's measurement apparatus that enables the user to readily mark and locate the position of electrical boxes, switches and outlets having varying sizes and shapes, at a selected distance from a floor or other surface, thereby meeting applicable code requirements. Yet up until the time of applicant's invention such an integrated measurement apparatus, capable of marking and locating the position of electrical boxes, switches and outlets, at a selected distance from

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a floor or other surface in conformance with applicable code requirements, has not been suggested by any prior art worker, including Plesh, Jardine, or Gottlieb. The prior art inventions and their attendant disadvantages are discussed at pages 1 – 3 of the specification. It is submitted that the proposed combination of Plesh in view of Jardine and Gottlieb cannot properly be made in the absence of applicant's own disclosure. Even then, the proposed combination would require substantial reconstruction and redesign of the device taught by the primary reference, which is not disclosed by the secondary references.

Specifically, Plesh discloses an electrical stick for use in the installation of electrical boxes comprising a “rectangular board having a continuous surface throughout” (Plesh at column 4, line 45 of claim 1). The Examiner has stated that it would have been obvious to modify the notches disclosed by Plesh by adding apertures as taught by Gottlieb, in order to allow a user to mark a horizontal straight line when marking the location of the boxes. It is submitted, however, that the inclusion of slots in the electrical stick disclosed by Plesh in view of Gottlieb would require a substantial reconstruction and redesign of the elements shown in Plesh as well as a change in the basic principle under which the Plesh construction was designed to operate. Accordingly, it is respectfully submitted that the combined teachings of the cited references are not sufficient to render applicant's claims obvious. *In re Ratti*, 123 USPQ 349, 352 (CCPA 1959). In particular, the inclusion of slots or apertures in Plesh's electric stick would disrupt the “continuous surface throughout” feature of Plesh and be in direct odds therewith.

Significantly, Plesh's electrical stick has a thickness ranging from $\frac{1}{4}$ inch – 3 inches thick depending on the type of finished walls to be used, so that the electrical box rests flush with the wall surface (Plesh at column 2, lines 55 – 58; column 4, lines 46 – 51 of claim 1).

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Were the electrical stick in Plesh to include slots for markings, such a function would be operationally impracticable unless the slot is large enough to accommodate the full diameter of a pencil as opposed to merely accommodating the pencil tip. In any event, such an operation would be highly cumbersome; would entail attempts to insert a pencil to make a mark on a surface when the electrical stick is at or near the 3 inch thick range.

The electrical stick disclosed by Plesh further comprises a plurality of markings (referred to as upper, middle, and lower height indicators, 11, 13, and 17, respectively) at predetermined locations with indicators indented under the markings (referred to as upper, middle, and lower height box indicators, 12, 14, and 18, respectively) to indicate the proper height of the boxes (Plesh at column 2, lines 59 – 65; column 3, lines 1 – 9; and lines 52 -61 of claim 1). The inclusion of slots or apertures, as disclosed by Gottlieb, would obviate the need for the upper, middle, and lower height box indicators and would further result in a completely different operation of Plesh's electrical stick.

That is to say, in operation of the electrical stick disclosed by Plesh, the user places the device up against a stud and places the electrical box next to the electrical stick at the proper box indicator, "bringing the box flush with the [electrical] stick" and nailing the box into the stud (Plesh at column 3, lines 54 – 63). Plesh neither requires nor calls for markings or outlines, but rather requires the direct nailing of the box in relation to the apparatus. The Plesh apparatus is utilized in framed construction, before sheet-rock and other wall materials are included on the building structure's frame, whereas Gottlieb's device is primarily utilized in framed and walled construction sites.

Modifying slots within the apparatus of Plesh would change the principal of operation of Plesh's electrical stick embodiments. Plesh discloses an embodiment of the electrical stick

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wherein the electrical stick includes top and bottom adjustable clamps (24L, 24R, 29L, and 29R) that are used to pull the electrical stick against the stud (column 3, lines 14 – 24, and figure 3) and securely fasten the stick to the stud (column 4, lines 1 – 3). In yet another embodiment, Plesh discloses an electrical stick having extended height indicators “protruding off the sides of the [electrical] stick (column 3, lines 31 – 38, and figure 4). In addition, Plesh discloses another embodiment of the electrical stick wherein the stick includes both the protruding extended height indicators and the adjustable clamps (24L, 24R, 29L, and 29R). Modifying the electrical stick in Plesh to include slots for marking would be at odds with the operation of these embodiments because one would not need slots when one has extended indicators to guide the placement of the electrical box. Moreover, it would be inconvenient to clamp the apparatus of Plesh to a stud for the simple act of making a mark, before de-clamping the apparatus, and nailing up the electrical box.

In reference to claim 1, the Examiner states that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus disclosed by Plesh by adding a level and indicia, as taught by Jardine, in order to level the apparatus horizontally and properly orient and position the boxes, and in order to determine the distance of the notches from the floor when marking the box locations, i.e., to determine which notch is the appropriate distance from the floor. It is submitted however, that Plesh's apparatus is used in conjunction with and flush against a stud; the placement and construction of the stud is a constant variable in placement of the electrical box, as the box is nailed to the stud so that the side of the box lies flush against the side of the stud. Therefore the leveling of the electrical box in Plesh is purely a function of the prior placement of the stud and a level is not necessary or relevant in the placing of the electrical box when utilizing the apparatus

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disclosed by Plesh. For these reasons, it is submitted that there is no suggestion or motivation to include a level in the apparatus disclosed by Plesh because the placement of the electrical boxes and visa vie the utilization of the electrical stick is a direct function of the stud and is not a function of a level.

Furthermore, in reference to claim 1, the Examiner has indicated that it would have been obvious to modify the apparatus disclosed by Plesh, Jardine, and Gottlieb by providing another set of indicia on the other edge of the body. The Examiner has cited *St. Regis Paper Co. v. Bemis Co.* for the finding that the mere duplication of the essential working parts of a device involves only routine skill in the art (*St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (1977)).

Indicia located on both sides of the body of the apparatus as called for by applicant's present claims 1, 2, and 5 does not represent a "mere duplication of the essential working parts of a device". Rather, the inclusion of the indicia on both sides of the device provides it specific advantages which are otherwise not attained. In particular, the electrician's measurement apparatus called for by present claim 5 facilitates level placement of the outlet box, or the like, by allowing the user to mark off locating points so that the box can be precisely leveled and located at a fixed location.

In reference to claim 2, the Examiner stated that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus disclosed by Plesh, Jardine, and Gottlieb by adding a textual portion of the standard or codes on the apparatus. The Examiner indicated that Gottlieb teaches that providing a text of building laws or other requirements is beneficial since it allows an inexperienced individual using the apparatus to conform to building laws and other requirements. However, the

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electrical stick disclosed by Plesh has markings (height indicators) and height box indicators on both sides (i.e. the front and back) of the electrical stick (column 2, lines 59 – 60; column 3, line 10 – 13; and figure 2). Clearly, the addition of the textual portions of standards or codes to the back of the Plesh's electrical stick, in view of Gottlieb, would create conflict between the markings thereon and prevent proper operation thereof. Specifically, the modification to include the standard or code text would interfere with the "both sides" feature of Plesh and negate Plesh's objective to provide measurement "markings on both sides to make for easier use" (column 2, line 59 – 60).

Moreover, Plesh's electrical stick is required to have a width ranging between 2.25 – 3 inches (column 2, lines 55 – 56; and column 4, line 47 of claim 1). In contrast, present claim 5, which is directed to a preferred embodiment of the apparatus delineated by present claim 1, requires that the "elongated body at the first end has a width of 2 – 4 inches" in width. Plesh's entire electrical stick ranges from 55 – 75 inches in length, 2 ¼ – 3 inches in width, and can have a thickness ranging from ¼ – 3 inches thick (Plesh at column 2, lines 55 – 58; column 4, lines 46 – 51 of claim 1). The range provided by applicant's claim 5 improves the leveling of the apparatus when in use and mitigates inaccuracies that can be caused by irregular floor or surface patterns. None of the references, either alone or in combination, disclose an apparatus including a first end having a width ranging from 2 – 4 inches.

Assuming, arguendo, that the Jardine and Gottlieb references could be combined in the manner proposed by the Examiner, the resultant structure would still not enable the location and marking of electrical boxes, switches and outlets in accordance with applicable industry standards and codes to proceed with the ease, precision and versatility afforded by

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the electrician's measurement apparatus herein claimed. Rather, any device constructed by Plesh in light of the Jardine and Gottlieb teachings would require a device thickness that corresponds with the thickness or depth of the electrical box (see discussion above on page 5 herein). Moreover, any such device, constructed in light of the combined teachings of the cited references, would require a plurality of slots, and indicators on both sides, as well as text on one side setting forth standards, along with a level. Such a device, constructed from the combined teachings of the cited references, would be subjected to operational problems. The device would be impractical and cumbersome to use, requiring insertion of a pencil through a slot having a thickness ranging up to three inches. Moreover, with such a device, the presence of overly cluttered indicia and text would impair reading and interpretation thereof. As a result, any apparatus constructed in light of the combined teachings of the references would be more expensive to produce, harder to use, and much less reliable in operation.

In contrast to the teachings of the cited references, the electrician's measuring apparatus called for by applicant's claims 1, 2 and 5, requires the combined presence of a plurality of features, namely: an elongated body having a plurality of slots at a plurality of locations for the placement of electrical boxes, switches, and outlets in accordance with selected standards or codes, the elongated body having a set of indicia on each edge of the front side thereof, and including a level. Surprisingly, it has been discovered that by combining together the aforesaid structural features, as required by applicant's claims, the efficiency of electrical installations, and the operating reliability of the measurement apparatus, are increased. The electrician's measuring apparatus called for by applicant's present claims 1, 2, and 5 advantageously guides the electrician, enabling an accurate and

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level positioning of electrical boxes, switches and outlets at precise locations above regular and irregular surfaces of floors and counters, in compliance with applicable requirements of standards and codes.

In view of the remarks set forth above, it is submitted that the present application is in allowable condition. Entry of the present Response, reconsideration of the final rejection of present claims 1, 2, and 5, and their allowance, are earnestly solicited.

Respectfully submitted,
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